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On the Tæniodonta, a new group of Eocene Mammalia.—Prof. COPE described the characters of some mammalia from the Eocene of New Mexico, obtained by him during the Wheeler expedition of 1874, which he regarded as allied to the *Insectivora*. The feet are armed with compressed claws. The dental characters are seen first in the supposed superior incisors. Unfortunately, they have not yet been found in place in the cranium, but their association with a rodent type of inferior incisors, which have been found in place in the mandible, confines us to the alternative choice between superior incisors and canines. From the small size, or absence, of inferior canines, a similar character may be inferred for the superior canines.

These superior incisors present two bands of enamel, an anterior and a posterior. They are compressed in form, the sides presenting a surface of dentine or cementum. Attrition produces a truncate or slightly concave extremity. The inferior incisors are rodent-like.

Two families represented this suborder in the Eocene period in New Mexico. The first, or *Ectoganidæ*, possesses molar teeth with several roots; in the *Calamodontidæ*, each molar has a simple conic fang. But one genus of each family is known. In both the enamel of the molars is principally a band on the outer side of the crown; the deficiency is supplied in *Calamodon* by a deposit of cementum, which invests the molar and superior incisor teeth, covering the crowns, excepting where the enamel bands are present. The latter investment is so much thinner, that the cementum forms a raised border all round at the point of junction of the two substances. The general structure of *Calamodon* affords some points of approximation to the *Edentata*, which indicate that the *Tæniodonta* partially fill the interval between that order and the *Insectivora*, presented by the existing fauna.

Prof. Cope also pointed out the close resemblance between the mandibular dentition of the cotemporary Eocene genus *Esthonyx*, and the existing *Erinaceus*, and stated that that of *Anchippodus* and allies chiefly differs from the latter in the persistent growth of the incisor teeth.

On Tantalite from Yancey County, North Carolina.—DR. GEO. A. KOENIG spoke of a mineral from Yancey County, North Carolina. It occurs there with beryll, samarskite, columbite, spessartite, and other rare and interesting minerals. It is found in large massive pieces, has a black color and metallic lustre, streak dark reddish brown to black. The specimen in my possession weighs about a pound. It possesses three crystal faces, two of which are at right angles, all three in the same zone. One face is large, smooth, and bright, the other two are rough and uneven, and brown from ferric hydrate. There appears to be an imperfect cleavage parallel to the two faces at right angle. Fracture uneven to sub-conchoidal.

Specific gravity = 5.807 (made with 4.6 grms.) B. B. Infusible and unaltered. With borax in oxidizing fl. dissolves in large quantity, and gives a glass which is blood-red when cold (iron, manganese). In reducing flame turns green, and when highly charged a blood-red; the same with tin or charcoal. With microcosmic salt in reducing flame, light brown.

The mineral decomposes readily when fused with about six parts of sodium hydrosulphate, the fused mass being yellowish when cold.

The analysis gave

Metallic acid	=	76.60
FeO	=	14.07
MnO	=	0.50
MgO	=	7.70
		<hr/>
		98.87

The metallic acid dissolves in very large quantities in microcosmic salt, and the bead turns brown only upon complete saturation, when treated with the reducing flame. From this behavior he surmised the larger portion to be tantalic acid, and the smaller portion to be hyponiobic acid. But in order to satisfy himself more thoroughly, he converted the acids into the sodium salts by fusing with sodium hydrate. This fusion was extracted repeatedly with cold water. From the liquid the acid was precipitated by dilute sulphuric hydrate filtered under pressure, and the moist precipitate treated with tin and hydrochloric acid to test for dianic acid; a dirty-blue mass was obtained, no blue solution, and the absence of dianic acid was proven. The blue color was due to hyponiobic acid. The larger portion of sodium salt had not been dissolved in cold water, it was dissolved in boiling water and precipitated with dilute sulphuric hydrate. The precipitate was treated with zinc and very dilute sulphuric acid, whence the white metallic acid assumed a pale, bluish-gray color, and is, therefore, tantalic acid. Based upon these reactions, the mineral under examination must be pronounced a *tantalite*.

It will be remarked that magnesium forms the principal basis besides iron, and not manganese, as in other tantalites and columbites, and this is, therefore, a distinct and new variety.

He had endeavored to decompose the mineral in a sealed tube under pressure, but failed to do so both with strong and weak acid during several days' treatment. The question whether the iron is ferrous or ferric could not be settled therefore, and in assuming it to be ferrous, he followed the example of the illustrious Heinrich Rose.

Being engaged for the present in other investigations, and aware of Professor Allen's intention to increase our knowledge of these compounds, he refrained from a more thorough examination of the quantitative proportions of the two acids in this mineral.